UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of CONSUMERS POWER COMPANY (Big Rock Point Nuclear Plant)	Docket No. 50-155

Contentions of Christa-Maria

Christa-Maria submits the following contentions:

1. The NRC is prohibited from allowing the expansion of the spent fuel pool at the Big Rock Nuclear Power Plant until it has determined either (1) that there is reasonable assurance that facilities for off-site storage or permanent disposal of the spent fuel will be available before the expiration of the plant's operating license, or (2) that there is reasonable assurance that the fuel can be stored safely at the site indefinitely beyond the expiration of the operating license. In addition, if the NRC finds a reasonable assurance that facilities for off-site storage will be available before the license expiration, the NRC must also determine that permanent storage at those facilities will be safe or that permanent disposal of the fuel will be possible before storage of the fuel at the off-site storage facility becomes unsafe. The NRC must make these findings either on the basis of a generic rulemaking proceeding or on the basis of this licensing proceeding.

The basis for this contention is the decision of the Court of Appeals for the District of Columbia Circuit in State of Minnesota v. U.S. Nuclear Regulatory Commission, 602 F.2d 412 (D.C. Cir,. 1979), which directs the NRC to address these issues. In response to the Court's order the NRC has initiated a generic proceeding. The Federal Register notice announcing this proceeding states that the issues to be considered generically should not be addressed in individual licensing proceedings. 44 F.R. 61372, 61373 (October 25, 1979). If that is to be the case, the NRC may not issue a license amendment permitting spent fuel pool expansion until it has concluded the generic proceeding.

2. The increase in fuel stored in the Big Rock pool will result in an increase in the amount of radiation released to the environment at the south wall of the storage pool where there is less shielding according to the Applicant's Description and Safety Analysis. An increase in the level of radiation released to the environment increases the risks to the health and safety of the public in the vicinity of the plant.

3. The use of type 304 austenitic stainless steel in the new spent fuel storage racks could lead to corrosion cracking in the pool environment, with a resultant risk to the integrity of the racks and the continued safe storage of the fuel. IE Bulletin 79-17 and a Board Notification entitled "Pipe Cracks in Stagnant Borated Water Systems at PWRs"

in the Matter of Commonwealth Edison Co. (Zion Station, Units 1 and 2) Docket No. 50-295, 50-304, August 14, 1979, have discussed the fact that intergranular stress corrosion cracking has occurred in 304 stainless steel used in nuclear plants.

4. In its Description and Safety Analysis the Applicant has failed to provide sufficient information about the new storage racks and the pool environment to permit an assessment of all possible safety hazards which may occur as a result of the expansion of the capacity of the pool. The Applicant offers a general description of the kind of storage rack it may use, but does not specify either the precise type or rack vendor. Nor does the Applicant indicate what pool environment it will maintain if the expansion is permitted, i.e., the Description and Safety Analysis does not state whether the pool water will be borated, oxygenated, stagnant or demineralized. This information has been shown to be critical, at the Zion facility for example, to a determination of whether corrosion and cracking can be expected in the racks. Licensing Board Memorandum and Order, In the Matter of Commonwealth Edison Co., (Zion Station, Units 1 and 2) Docket No. 50-295, 50-304, September 14, 1979, _____ NRC _____.

5. The long term effects of heat and water on the integrity of the cladding of spent fuel are unknown. Experience is limited to some 13 years of storage. Over the time period that will be required for pool storage at Big Rock the cladding of the spent fuel is likely to break

down, releasing significant quantities of radioactive material into the pool water. Such releases would threaten the safe operation of the pool and place the public at risk of exposure to high levels of radiation.

6. The long term effects of heat and water on the stainless steel liner of the pool and its welds and the concrete underneath are unknown. Over the period of time in which fuel will be stored at Big Rock, the heat and water will stress the structure of the steel and concrete, resulting in cracking and weld breaks which will release radioactive materials into the environment.

7. The increase in the amount of radiation absorbed by the plant's demineralizers and then released to the atmosphere through the off-gas system presents an unacceptable risk to the health of residents in the vicinity of the plant.

8. The requested license amendment may not be granted until the NRC has considered the consequences of a Class 9 accident at the Big Rock plant. The occurrence of a Class 9 accident at Three Mile Island Unit No. 2 on March 28, 1979, establishes that such accidents are credible events and must be considered by the NRC. Due to the increase in the total amount of highly radioactive spent fuel that would be stored at the plant, a Class 9 accident in any way related to the spent fuel could result in significantly greater risk to the public health and safety than would be the case if the increased storage were not allowed.

9. The events at TMI-2 showed the inadequacy of NRC emergency planning requirements. Emergency planning beyond the LPZ is a recognition of the residual risk associated with major reactor accidents whose consequences could exceed those associated with so-called design basis events. In the context of spent fuel pool expansion, emergency planning must be based on a worst case analysis of potential accident consequences related to the spent fuel pool. In particular, it must take into account the significant increase in radioactive spent fuel that will be stored at the plant if this License Amendment is granted.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I served the final Contentions of Christa-Maria on the following parties by U.S. mail, postage prepaid, this 30th day of October, 1979:

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